



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/778,527	02/07/2001	Hideo Morimoto	11A 3067	3179

7590

10/03/2003

Koda & Androlia  
2029 Century Park East  
Suite 1430  
Los Angeles, CA 90067-3024

EXAMINER

NGUYEN, CHANH DUY

ART UNIT

PAPER NUMBER

2675

DATE MAILED: 10/03/2003

12

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/778,527

Applicant(s)

MORIMOTO ET AL

Examiner

Chanh Nguyen

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 September 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2 and 4 is/are allowed.
- 6) ☒ Claim(s) 1 and 3 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on September 11, 2003 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zimmerman et al (U.S. Patent No. 6,437,772) in view of Shimada et al (U.S. Patent No. 6,051,853) and further in view of Ishihara et al (U.S. Patent No. 5,889,242).

As to claim 1, Zimmerman (e.g., Figure 7A) discloses a capacitance type sensor including a substrate (28), a group of fixed electrodes (30) provided on an upper face of the substrate (28), a movable electrode plate (60) having an electrode (62) on a lower flat face thereof, Zimmerman teaches a gap provided between the group of fixed electrodes (30) on the substrate (90) and the electrode (62) on the movable electrode (60) (see Figure 7a). Zimmerman teaches a movable electrode (60) having a rubber elasticity (see column 8, lines 31-32 and lines 44-50). Although Zimmerman only describes an articulating member (or movable electrode plate 59) on column 8, lines 31-32 and lines 44-50 being a resilient rubber member, but it is clear that the articulate member (60) of Figure 7A is also a resilient rubber member since both articulate members (59 and 60) in Figure 6 and 7A have the same structure .

Zimmerman does not mention at least a solder layer having thickness , in which the solder layer support the movable electrode plate. Shimada teaches a well-known feature of a solder layer (202) which supports the movable electrode (201); see Figure 12 and see column 9, lines 45-52. Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have provided a solder layer as taught by Shimada to the portion of the movable electrode plate (60) of Zimmerman so that it can be deformed by an external force; see column 9, lines 47-51 of Shimada.

Shimada teaches a solder layer which support the moveable electrode plate, but does not mention that the solder layer is conductive solder layer. However, Ishihara teaches a thin resilient metal sheet (38) which support the moveable electrode plate. The metal sheet (38) clearly is a conductive material (see column 8, lines 18-21). Therefore, it would have been obvious to one of ordinary skill in the art at the invention was made to have provided a layer of conductive elastomer as taught by Ishihara to the movable electrode plate of Zimmerman as modified by Shimada so as to provide a smaller, thinner and lighter in weight of the multidirectional operating apparatus (see column 20, lines 48-54 of Ishihara).

As to dependent claim 3, this claim are met by Zimmerman and Shimada. For example, Zimmerman teaches the electrode ( 62) on the movable conductive rubber plate being made of a conductive rubber plate (see column 9, lines 57-64).

### ***Allowable Subject Matter***

5. Claims 2 and 4 are allowed.

### **Inquiries**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chanh Nguyen whose telephone number is (703) 308-6603.

Art Unit: 2675

If attempts to reach the examiner by telephone are unsuccessful, the examiner supervisor, Steven Saras can be reached at 305-9720.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

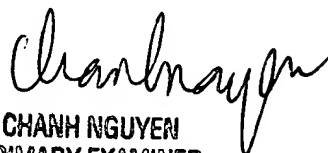
**(703) 872-9314 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121  
Crystal Drive, Arlington, VA, Sixth Floor (Receptionist)

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.

cm

C. Nguyen  
September 24, 2003

  
CHANH NGUYEN  
PRIMARY EXAMINER